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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,427	11/19/2003	Serge Haumont	NOKM.074PA	7014
7590 03/27/2007 Hollingsworth & Funk, LLC Suite 125 8009 34th Avenue South Minneapolis, MN 55425			EXAMINER JEAN GILLES, JUDE	
			ART UNIT 2143	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			03/27/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/717,427

Applicant(s)

HAUMONT, SERGE

Examiner

Jude J. Jean-Gilles

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/26/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

This office action is responsive to communication filed on 11/19/2003.

### *Information Disclosure Statement*

1. The references listed on the Information Disclosure Statement submitted on 04/26/2004 have been considered by the examiner (see attached PTO-1449A).

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1-20, and 26-37** are rejected under 35 U.S.C. 102(e) as being anticipated by Rueger et al (Rueger), US Pub No. 2003/0018806 A1.

Regarding **claims 1-20, and 26-37**, Rueger discloses :

1. A system for reducing database queries in connection with message transmissions, comprising:

a subscriber database for storing message routing information for a plurality of mobile device subscribers, the message routing information including subscriber information and addresses of network nodes to which the subscribers are currently registered (fig. 3; par. 0036, 0037, and 0048);

a sending network element configured to retrieve the message routing information from the subscriber database for at least one destination subscriber among the plurality of mobile device subscribers, wherein the sending network element is configured to transmit at least one message and the message routing information towards the destination subscriber (par. 0010, 0040, 0048, and 0049); and

a messaging center coupled to receive the message and the message routing information from the sending network element via a data network, and to facilitate transmission of the message to a mobile device of the destination subscriber using to the message routing information received from the sending network element (see fig. 4, item SC2; also see par. 0035, 0043, 0059, 0065, and 0067).

2. The system as in claim 1, further comprising a cache to store the message routing information for use with transmission of at least one subsequent message towards the destination subscriber (par. 0040).

3. The system as in claim 2, wherein the sending network element is coupled to the cache and configured to query the cache to obtain the stored message routing information (par. 0040).

4. The system as in claim 3, wherein the network element is configured to transmit the message and the stored message routing information from the cache, if the cache contains the message routing information (par. 0040).

5. The system as in claim 3, wherein the cache is configured to retrieve the message routing information from the subscriber database if the cache does not contain the message routing information (par. 0040).

6. The system as in claim 2, wherein the messaging center is further configured to query the cache to request that the cache obtain the stored message routing information if the message routing information is not received by the messaging center, or if the subscriber information is unknown to the network node identified by the address provided via the message routing information (par. 0040; also see 0059, 0065, and 0067).

7. The system as in claim 1, wherein the messaging center is configured to query the subscriber database to obtain the message routing information if the message routing information is not received by the messaging center or if the subscriber information is unknown to the network node identified by the address provided via the message routing information (0010-0013).

8. The system as in claim 1, further comprising a Mobile Switching Center/Visiting Location Register (MSC/VLR) to which the destination subscriber is currently registered, and wherein the address of the network node to which the destination subscriber is currently registered comprises at least the address of the MSC/VLR to which the

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destination subscriber is currently registered (fig. 4; 0001; also see the disclosure of claims 1 and 6 in page 5).

9. The system as in claim 8, wherein the subscriber information comprises a unique subscriber identifier identifying the destination subscriber, and wherein the messaging center is configured to transmit the message to the MSC/VLR for delivery to the destination subscriber identified by the unique subscriber identifier (fig. 4; par. 0001).

10. The system as in claim 8, further comprising a Serving GPRS Support Node (SGSN) to which the destination subscriber is currently registered, and wherein the address of the network node to which the destination subscriber is currently registered further comprises the address of the SGSN to which the destination subscriber is currently registered.

11. The system as in claim 10, wherein the subscriber information comprises a unique subscriber identifier identifying the destination subscriber, and wherein the messaging center is configured to transmit the message to the SGSN for delivery to the destination subscriber identified by the unique subscriber identifier (0001, and 0010).

12. The system as in claim 1, further comprising a Serving GPRS Support Node (SGSN) to which the destination subscriber is currently registered, and wherein the address of the network node to which the destination subscriber is currently registered

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comprises at least the address of the SGSN to which the destination subscriber is currently registered (0001, and 0010).

13. The system as in claim 1, wherein the subscriber information comprises an International Mobile Subscriber Identity (IMSI) (0001, and 0010).

14. The system as in claim 1, wherein the network element is configured to retrieve the message routing information from the subscriber database using a contact address of the mobile device of the destination subscriber as an index to the subscriber database (0044, 0059).

15. The system as in claim 14, wherein the contact address comprises a Mobile Subscriber ISDN Number (MSISDN) of the mobile device of the destination subscriber (0044, 0052, and 0065).

16. The system as in claim 1, wherein the subscriber database comprises a Home Location Register (HLR) in which the destination subscriber is registered (0001, and 0010).

17. The system as in claim 1, wherein the network element comprises any of a WAP gateway, presence server, terminal management server, messaging gateway, payment server, or a messaging center (fig. 4).

18. The system as in claim 1, further comprising a signaling network, wherein the network element is configured to query the subscriber database of the destination subscriber via the signaling network (fig. 4).

19. The system as in claim 18, wherein the signaling network comprises an SS7 network. *Note that SS7 is a protocol used in the public switched telephone system (the "intelligent network" or "advanced intelligent network") for setting up calls and providing services. SS7 is a separate signaling network that is used in Class 4 and Class 5 voice switches and is inherent to the disclosure of the claimed invention.*

20. The system as in claim 1, wherein the sending network element comprises a sending Multimedia Messaging Service Center (MMSC) and the messaging center comprises a receiving MMSC, and wherein the message comprises a Multimedia Messaging Service (MMS) message (0001; see claims 1 and 6 in page 5).

26. A method for reducing queries associated with the transmission of messages over a network, comprising: initiating a query, from at least one network element involved in the transmission of messages, to a subscriber database associated with a destination subscriber (fig. 3; par. 0036, 0037, and 0048); in response to the query, receiving message routing information for transmitting at least one message from the network element towards the destination subscriber (par. 0010, 0040, 0048, and 0049);



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transmitting the message and the message routing information from the network element to a messaging center associated with the destination subscriber; and transmitting the message from the messaging center to a delivery node for ultimate delivery to the destination subscriber, wherein the message is transmitted from the messaging center to the delivery node identified by the message routing information received from the network element (see fig. 4, item SC2; also see par. 0035, 0043, 0059, 0065, and 0067).

27. The method of claim 26, further comprising querying the subscriber database by the messaging center to obtain the message routing information if the message routing information was not received with the message (0001; 0040).

28. The method of claim 26, further comprising querying the subscriber database by the messaging center to obtain the message routing information if delivery of the message to the delivery node fails (0001; 0015).

29. The method of claim 28, wherein querying the subscriber database by the messaging center comprises querying the subscriber database by the messaging center if subscriber information provided via the message routing information is unknown to the delivery node identified by the message routing information (0010-0013).

30. The method of claim 28, further comprising providing delivery status by the

messaging center to the subscriber database if an address of the delivery node obtained from the subscriber database is the same as the address of the delivery node obtained from the message routing information provided by the at least one network element (0001, 0036-0038).

31. The method of claim 26, further comprising storing the message routing information that was received in response to the query in a cache (0040).

32. The method of claim 31, further comprising initiating a query from the at least one network element to the cache to obtain the message routing information for transmission of a subsequent message to the messaging center (0040).

33. The method of claim 31, further comprising initiating a query from the messaging center to the cache to request that the cache obtain updated message routing information if the subscriber information is unknown to the delivery node identified by the message routing information (0040).

34. The method of claim 26, wherein the message routing information for the destination subscriber comprises a subscriber identifier and an address of the delivery node to which the destination subscriber is registered (0040).

35. The method of claim 34, wherein the subscriber identifier comprises an International

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Mobile Subscriber Identity number (INIS), and wherein the address of the delivery node comprises an address for one or more of a Mobile Switching Center/Visiting Location Register (MSC/VLR) and a Serving GPRS Support Node (SGSN) (0044; 0067-0068).

36. A network element for facilitating the transmission of messages over a network, comprising: a query module configured to formulate a query to a subscriber database associated with a destination subscriber (fig. 3; par. 0036, 0037, and 0048); a network interface to transmit the query and to receive message routing information in response thereto; a message transmission module to associate the message with the message routing information (par. 0010, 0040, 0048, and 0049); and wherein the network interface transmits the message and associated message routing information to a messaging center serving the destination subscriber, wherein the message routing information includes a subscriber identity of the destination subscriber and an address of a delivery node for use by the messaging center in delivering the message to the destination subscriber (see fig. 4, item SC2; also see par. 0035, 0043, 0059, 0065, and 0067).

37. A computer-readable medium having instructions stored thereon which are executable by a computer system for reducing queries associated with the transmission of messages over a network by performing steps comprising: initiating a query to a subscriber database associated with a destination subscriber (fig. 3; par. 0036, 0037, and 0048); receiving message routing information for transmitting a message towards

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the destination device (par. 0010, 0040, 0048, and 0049); and transmitting the message and the message routing information to a messaging center associated with the destination subscriber to facilitate transmission of the message from the messaging center to the destination subscriber using the message routing information (see fig. 4, item SC2; also see par. 0035, 0043, 0059, 0065, and 0067).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rueger in view of Mulligan et al (Mulligan) U.S. Pub. NO. 20030105864 A1.

**Regarding claim 1:** Mulligan discloses the invention substantially as claimed. Mulligan teaches the system for managing database queries of claim 1 and 20, but fails to specifically disclose "a push proxy gateway coupled to the receiving MMSC to receive the subscriber information and the network node address provided by the sending MMSC; and a notification node operable to notify a mobile station associated with the destination subscriber that the MMS message is available, wherein the notification node is coupled to receive the subscriber information and the network node address for use in identifying the destination subscriber."

In the same field of endeavor, Mulligan discloses " *The Gateway GPRS Support Node (GGSN) 506 is a support node that acts as a gateway between the GPRS network 504 and a packet-switched public network such as the Internet 508. When the terminal 502 makes a GPRS attach, the IP address/MSISDN number pair is stored into the authentication broker 500. The MSISDN (Mobile Station ISDN/PSTN Number) is a mobile number used by GSM/DCS networks that contains information such as the country code, national destination code, Home Location Register (HLR) identifier and a subscriber identifier (ID). When the subscriber accesses a service, the WAP gateway 510 requests the subscriber ID from the authentication broker 500 using, for example, the source IP address as a key... an exemplary embodiment of the WAP bearer 1310 complies with WAP Push Specifications. There are various possibilities for this bearer. A first possibility is that the bearer may connect to an existing WAP Push Proxy Gateway (PPG) using the WAP Push Access Protocol (PAP). The pushing of messages to a mobile client device is facilitated by the PPG between the wired and wireless networks... Other examples include an MMS bearer that can be used for multimedia content. An MMS bearer can, for example, be based on the WAP MMS Specifications..*" [see Mulligan; par. 0064, and 0092-0094].

Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Mulligan's teachings of using push proxy gateway with the teachings of Rueger, for the purpose of improving the ability of a network "...to abstract the core push service behind a single Internet paradigm, namely Web Services which advantageously frees the Internet application

developer from requiring mobile technology-specific knowledge. Further, the illustrated embodiment of the invention abstracts the entire range of mobile push technologies behind a single gateway. This frees the Internet developer from having to assess the advantages and disadvantages of particular push technologies." As stated by Mulligan in par. 0085. By this rationale, **claim 21** is rejected.

**Regarding claim 22-25: the combination Rueger-Mulligan discloses:**

22. The system as in claim 21, wherein the receiving MMSC is configured to provide the subscriber information and the network node address to the push proxy gateway via a field of a Push Access Protocol (PAP) (see Mulligan; par. 0064, and 0092-0094).

23. The system as in claim 22, wherein the push proxy gateway is configured to provide the subscriber information and the network node address to the notification node via a Short Message Service (SMS) message (see Mulligan; par. 0091, 0092; see Rueger par. 0031).

24. The system as in claim 23, wherein the notification node comprises a Short Message Service Center (SMSC) (see Mulligan; par. 0091, 0092; see Rueger par. 0031).

25. The system as in claim 1, wherein the sending network element comprises a sending Multimedia Messaging Service Center (MMSC) and the messaging center

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comprises a receiving MMSC, and wherein the sending MMSC is configured to transmit the at least one message and the message routing information to the receiving MMSC via an MM4 interface (see Mulligan; par. 0091, 0092; see Rueger par. 0031).

**Conclusion**

6. **THIS ACTION IS MADE NON-FINAL.** The Examiner strongly anticipates a Final Rejection Office Action on the next response if amendments are not properly made to the claims to perhaps place them in condition for allowance.

Any inquiry concerning this communication or earlier communications from examiner should be directed to Jude Jean-Gilles whose telephone number is (571) 272-3914. The examiner can normally be reached on Monday-Thursday and every other Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley, can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-9000.

Jude Jean-Gilles

Patent Examiner

Art Unit 2143

JJG

March 18, 2007



DAVID WILEY  
SUPERVISORY PATENT EXAMINER  
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